Central Texas Community Foodshed Assessment Draft Report 2009-2011

by Karen Banks June 27, 2011

GOALS

City of Austin/Travis County Sustainable Food Policy Board Charges:

- Monitor the availability, price and quality of food throughout the Austin and Travis County area;
- 2. Collect data on the food security and the nutritional status of city residents;
- 3. Inform city and county policy makers, administrators, and the public at large about the status of the region's food system and food security;
- 4. Monitor and analyze the administration of city and county food and nutrition programs;
- 5. Explore new means for the city and county to improve the local food economy, the availability, sustainability, accessibility, and quality of food and our environment, and assist city and county departments in the coordination of their efforts;
- 6. Review availability and recommend measures to promote the preservation of agricultural land in the City of Austin and Travis County;
- 7. Recommend to the city and county adoption of measures that will improve existing local food production and add new programs, incentives, projects, regulations, or services.

Central Texas Foodshed Assessment Goals:

- 1. Appropriately address disparities in access to culturally appropriate, healthy food.
- 2. Create opportunities for regional farmers and food entrepreneurs which also increase food equity within our regional food system.
- 3. Estimate the capacity of the region to meet the food needs of its inhabitants.
- 4. Foster new connections between food-focused organizations to ensure that our local food system is holistic and effective.
- 5. Ensure the implementation of meaningful, comprehensive policies to support a healthy, viable, and sustainable Central Texas foodshed.

FOOD SECURITY IN CENTRAL TEXAS

In 1995, a burgeoning non-profit organization, Sustainable Food Center, produced an influential report exposing inequality in food access, availability and quality for residents of east Austin. This area was defined by Manor Road to the north, the Colorado River to the south, IH-35 to the west and Airport Boulevard to the east. At the time, the study area was composed of a high concentration of low-income and Hispanic residents. Relying on interviews with residents, observational surveys of area stores and context analysis of food resources, the report concluded that "the food system of East Austin reflects the characteristics of a community in which access to nutritious, affordable food is difficult for many residents (Fitzgerald 1995)." From this report arose the creation of a bus line connecting residents to nearby grocery stores as well as awareness of the benefits of alternative food programs, like farmers' markets and community gardens. The Central Texas Foodshed Assessment builds upon this antiquated yet frequently cited study, by providing updated and enhanced information on disparities in food access in Austin.

Texas is one of three states, along with Mississippi and Arkansas, with a rate of food insecurity significantly higher than that of the national rate. From 2007-2009, 17.4% of the residents in Texas suffered from low or very low food insecurity, compared to 14.7% nationally (USDA). It is estimated that the price tag for food insecurity in Texas is over \$9 billion a year, due largely to treatment of preventable diet-related illnesses, like diabetes, and lowered employee productivity (Hagert, 2007). From 2006 to 2007, the rate of diabetes in Texas rose from 8% to 10.3% (Texas Diabetes Council, 2008). Food assistance receives the second most requests from clients calling Texas 2-1-1, the free, state resource assistance hotline. Travis County is no exception. Calls to 2-1-1 for food assistance in Travis County increased by 8% in 2009 (Travis County, 2011). In Travis County, the Capital Area Food Bank (CAFB) is the main provider of emergency food assistance. Of the 21 counties in Texas in which CAFB operates, Travis County is home to the most emergency food assistance programs. There are 93 food pantries and soup kitchens in Travis County.

Based on estimates from a recent report by Feeding America and the Capital Area Food Bank, anywhere from 200,900 to 368,800 people seek food assistance from the Capital Area Food Bank annually. On a weekly basis, the Capital Area Food Bank and its 350 partner agencies provide assistance to between 41,000 to 54,900 people (Mabli, 2010). Of those households receiving assistance from CAFB, only 24.5% are currently employed while 78.3% have incomes at 130% or below the federal poverty level. Eighty percent are food insecure; however, only 26% receive benefits from the national Supplemental Nutrition Assistance Program (Mabli, 2010).

According to a report by Travis County Health and Human Services, since 2007 enrollment in SNAP in Travis County has steadily increased. At the end of calendar year 2010,

FOOD SECURITY IN CENTRAL TEXAS

11% of Travis County residents were enrolled in the SNAP program (Travis County, 2011). However, this number could be a lot higher. Over half (53%) of residents in Travis County eligible to receive SNAP benefits are not taking advantage of the benefits (Texas Food Bank Network, 2009). Of those residents who receive services from the CAFB and are eligible for SNAP benefits but are not enrolled, 44% have low food insecurity and 43.2% have very low food insecurity (Mabli, 2010). Under-enrollment is causing a loss of over \$157 million in revenue in SNAP benefits and over \$281 million in economic activity for the state (Texas Food Bank Network, 2009).

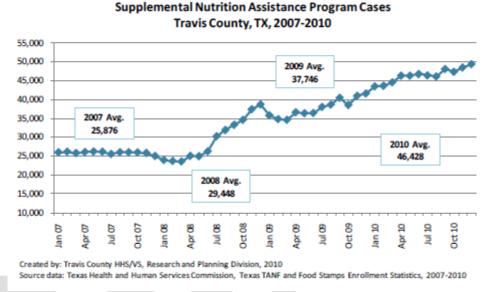


Table 1: Supplemental Nutrition Assistance Cases, Travis County, 2007-2010 (Travis County, 2010)

This steady increase in food assistance enrollment is an indication that families in Travis County are trying to stave off food insecurity because of changing demands on household incomes. While the increase in SNAP enrollment is potentially attributable to new outreach strategies or transformations in program requirements, it is more likely that other economic pressures are the cause of increased demands for government assistance. In 2008, the consumer price index for food increased by 6.4% over the previous year, with minimal change in 2009 and 2010, 0.5% and 0.3% respectively (Leibtag, 2011). The USDA predicts that the cost of food will increase by another 3-4% in 2011 (Leibtag, 2011).

Another financial hardship facing Travis County residents, especially low-income households, is the rapid population growth and subsequent increase in taxable housing value. According to the US Census Bureau, the Austin-Round Rock MSA was one of the fastest growing metro areas in 2009, with a 3.8% increase in population (US Census Bureau, 2009). In certain areas of Austin, especially east Austin, this growth significantly impacted property values. From

FOOD SECURITY IN CENTRAL TEXAS

2000-2005, residents in the 78702, 78617 and 78653 zip codes saw a 100% increase in the taxable value of their single-family homes. Residents of the 78721 zip code saw the taxable value of their single-family homes increase by as much as 80% (Frank and Robinson, 2005). With limited mechanisms available to help low-income families alleviate the financial burden caused by a rise in property taxes, residents may seek assistance to help cover other household expenses. For whichever reason, more families continue to seek financial assistance to meet their household expenses, including their food needs.



Goal:

Develop a model for estimating the regional production capacity of the Austin-Round Rock MSA to meet the food needs of area inhabitants.

Objectives:

Create an inventory of existing agricultural land based on the acreage under cultivation, potential capacity, production type, and crop specialty of area farms, and community gardens.

Identify deficiencies in the areas ability to meet survey-identified per capital consumption and the average USDA recommended daily allowance for a healthy diet based on regional crop production estimates.

Engage area farmers in participatory meetings to ascertain an account of the issues affecting regional farm stability, including water, labor, cost of living, inputs, regulatory barriers, and distribution infrastructure.

Goal:

Create new and profitable opportunities for regional farmers and food entrepreneurs which also increase food equity within our regional food system

Objectives:

Collect input from area farmers on barriers to and opportunities for business expansion, economic development and job training, especially for nascent farmers.

The spatial bounds of a community's foodshed are often difficult to determine. No metric has been defined to distinguish these boundaries. The peri-urban region serves as one means to define this spatial area. The peri-urban region is a zone of transition between the build urban landscape and the rural countryside. Within this region is a network of small to medium sized farms that are dependent upon the local, urban retail market. Given the proximity of this zone to the city center, these farms plays an important role in meeting the food needs of area households however they also maintain a precarious relationship with the built environment because they are engaged and fettered by the urban landscape.

"The peri-urban interface is characterized by strong urban influences, easy access to markets, services and other inputs, ready supplies of labor, but relative shortages of land and risks from pollution and urban growth (McGregor, 2006)." Access to urban markets provides economic opportunities for peri-urban farms yet leaves them subject to inflated land values and utility costs (Grigg, 1995). Farm stands and community supported agriculture (CSAs) are viable retail options for farms within the peri-urban region since customers can easily access the farm. This thereby also increases awareness about where food comes from and the importance of agriculture. Proximity to urban areas also offers easy access to materials and potential labor for farms (McGregor, 2006). Since urban agriculture consists of smaller farms, proximity to resources and capital is of the utmost importance because it reduces travel and time costs.

Proximity to the city center can also harm these farms as a result of fragmentation caused by the encroachment of urban development on open spaces surrounding the city center. Urban sprawl can lead to land fragmentation which reduces farm size, production capacity and wildlife conservation since it divides parcels into smaller subsets. Fragmentation stems from high property taxes and rent due to increased land values caused by nearby development. High property values can lead to under and over utilization of farmland since it a sign eventual farm loss (Grigg, 1995). Farmers may cease to input time or resource into the land knowing that they will receive a higher profit from sale of the land. Conversely, fields may be farmed so intensely as to stress the land in hopes of receipt of a profit from a final harvest. In addition to the loss of land, farms in the peri-urban interface also face a loss of labor to the urban job market (Grigg, 1995). While the urban center is a source of labor it is also a drain on the labor pool since many workers hope to find better paying jobs within the city center. The fragility of urban agriculture due to its location calls into question the ability of these farms to sustainably meet the food needs of area residents.

Mapping the Foodshed of Central Texas

In Central Texas, there are approximately 202 farms from 47 counties whose primary markets are the metropolitan areas within Bastrop, Caldwell, Hays, Travis and Williamson counties. One hundred and fourteen of which are located in the five county region. These farms occupy over 31,800 acres in Texas. By far, the majority of these farms are dedicated to vegetable production. Forty-eight percent specialize in fruit and vegetable production while 32% raise livestock.

	Number of Farms	Percent of Farms
Vegetables	93	48%
Fruit	17	9%
Cattle	20	10%
Dairy	3	2%
Poultry	14	7%
Eggs	10	5%
Pork	3	2%
Lamb	3	2%
Goat	1	1%
Goat Dairy	4	2%
Bison	2	1%
Livestock	3	2%
Quail	2	1%
Fish	2	1%
Wild Game	1	1%
Pecans	9	5%
Mushrooms	1	1%
Olives	1	1%
Herbs	2	1%
Honey	4	2%

These farms sell their products at one of the areas 29 farmers' markets, through a farm stand or online sales, directly to restaurants or other food retailers, or through a community supported agriculture program (CSA). Of these farms, 28 operate a CSA program.

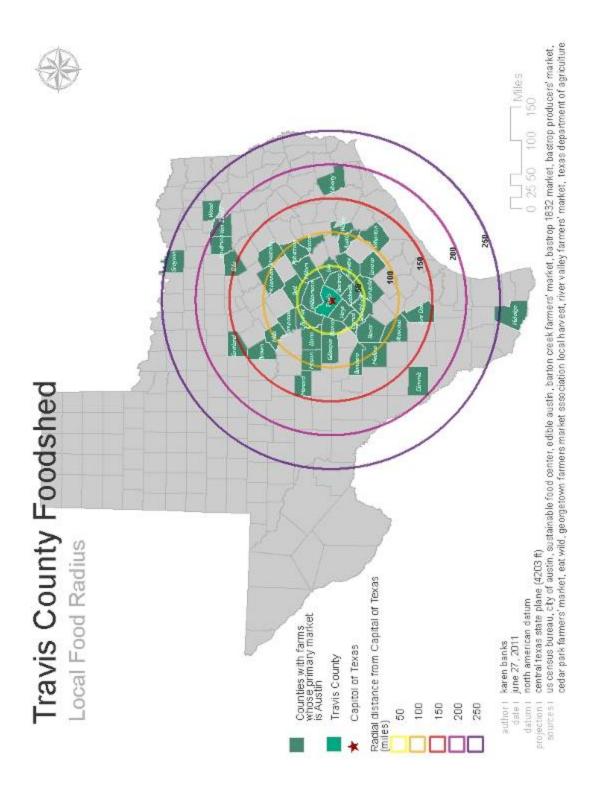


Figure : Distance locally grown food travels to serve the Austin Metropolitan Area

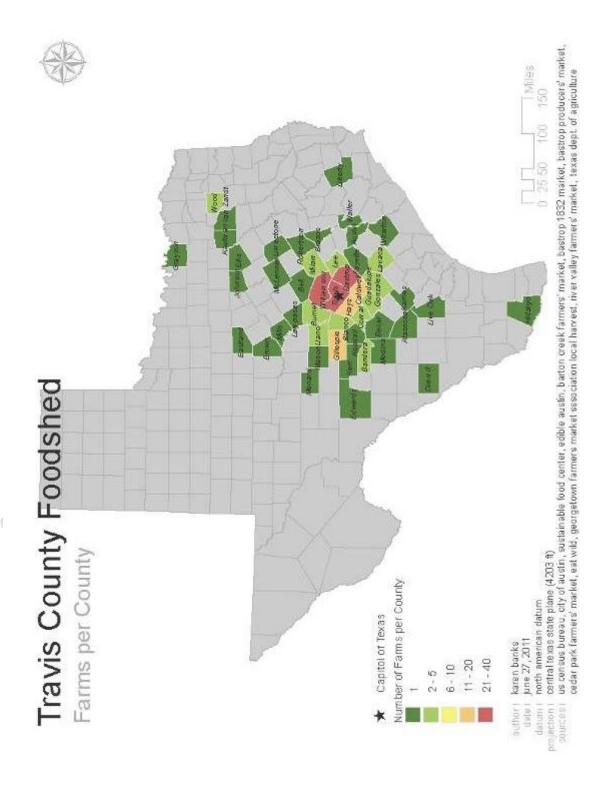


Figure: Farms per county that serve the Austin Metropolitan Area

IMPROVING OPPORTUNITIES FOR LOCAL AGRICULTURE IN CENTRAL TEXAS

Methodology

From February – October 2010, five discussions were held with 20 farmers from the five county region to discuss the state of agriculture in Central Texas, what is working, what is not working, and ways to reverse some of these trends. By far, the largest turnout was at the meeting in Elgin for Bastrop County.

Locations:

- Texas Organic Farmers and Gardeners Association Conference in San Marcos
- Norwood Towers in downtown Austin
- ACC Cedar Park Campus
- Dripping Springs City Hall
- First National Bank Community Center in Elgin

Analysis

Trends in agriculture in Central Texas show that the number of farms in the area is increasing while the size of farms is decreasing. Since 1992, the total number of farms in Bastrop, Caldwell, Hays, Travis and Williamson counties has increased by 41%, however, the average farm size has decreased by between 22-68%. Additionally, the market value of farmland has increased by between 110-196% since 1992. The number of full-time farmers is decreasing as well. The number of farms operated by a person whose principal occupation is something other than farming is greater than the number of farms operated by a full-time farmer. These trends are indicative of the sustainability of local agriculture in Central Texas.

What is working for agriculture in Central Texas?

- Local SCHOOL SUPPORT
- Local GOVERNMENT SUPPORT
- Local producer cooperatives
- **COOPERATION** between producers
- Year-round GROWING SEASON
- Increased **AWARENESS** of local, sustainable, organic
- Monthly farm tours and potlucks
- There exists a **CULTURE THAT VALUES GOOD FOOD** and recognizes hard work
- Network of KNOWLEDGEABLE FARMERS
- Holistic Management International (Texas)

What is not working for agriculture in Central Texas? Overwhelmingly, farmers pointed to the fact that the U.S. CULTURE lacks an appreciation of good food. People value CHEAP FOOD over good food.

- POLICIES that work against alternative products
- Understanding of GOOD NUTRITION
- Weather, WATER and the Texas LAW
- MONEY for education and awareness, for research, for labor and capital
- **REGULATIONS** on sampling at the farmers' market and tax exemptions for small farms
- **ETHICAL ISSUES**: re-selling, fair competition, transparency.
- Affordable and Accessible LAND
- USDA Organics Program
- Connecting new and existing farmer. In discussing connecting farmers, the point was
 made that connections need to be built between new farmers and retiring farmers in
 order to keep viable farmland under cultivation. As the older generation of farmers
 retires, who will take their place? Retirement planning that includes some sort of
 planning for the transfer of the farm to new farmers was an issue that farmers are
 concerned about but do not know how to address.

Where do we go from here? EDUCATION. EDUCATION. Start with the schools. Serve real food in the cafeterias. Teach cooking and gardening classes. Train teachers to educate their students about local agriculture. In addition to targeting schools, other solutions included the creation of ground water conservation districts in each county; encourage organizations (TOFGA) to engage more in policy matters relating to water issues; create or recruit more groups to provide funding for farmers (Slow Money); continue to strengthen communication between farmers, especially new and existing farmers.

Goal

Appropriately address disparities in access to culturally appropriate, healthy food based consumer perception of the regional food system.

Objectives

Evaluate nutritional accessibility by inventorying the availability, quality, cost, and origin of healthy produce at regional food providers, including grocery, convenience, and specialty stores; farmers' markets and farm stands; community, school, and backyard gardens; and federal nutrition assistance programs and emergency food agencies.

Identify gaps in physical accessibility by assessing the spatial relationship between existing transportation infrastructure, residential locations and food providers.

Conduct participatory action research to educate and engage community members in identifying social accessibility barriers by surveying participant on their perceptions of the existing food infrastructure and desires for the food system.

Area of Interest

Since 1995, East Austin has changed dramatically, especially in the last five years. The boundaries of the city limits have expanded and the demographics of the region have shifted. East Austin though, continues to house higher concentrations of low-income and minority populations. These areas with high concentrations of low-income and minority populations form the area of interest for this project, which extends beyond the original boundaries for that of Access Denied. In particular, this project looks at 11 zip codes: 78617, 78653, 78702, 78721, 78723, 78724, 78725, 78741, 78744, 78745, and 78753. Together, these zip codes form a contiguous area that encompasses 285 square miles primarily in East Austin. Identification of the area in terms of zip codes provides a common spatial reference by which to easily gather and compare information on demographics, retail locations, social service provision and area.

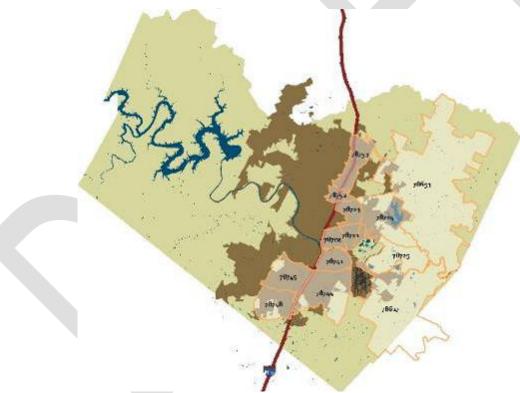


Figure 1: Target zip codes for study of disparities in access.

These 11 zip codes were chosen as the target area because of a high concentration, above the county average, of individuals below the poverty level, or the lack of a full-service grocery store. Each of these factors significantly impacts a household's access to healthy food. They are representative of what the USDA defines as a food desert: "an area in the United States with limited access to affordable and nutritious food, particularly such an area composed

of predominately lower income neighborhoods and communities" (Economic Research Service, 2009).

According to data from the 2000 Census, all zip codes except 78653 and 78725 have median household incomes below the county median which is significantly higher than the state median. Four zip codes, 78617, 78653, 78725, and 78745 have median household incomes above the state median.

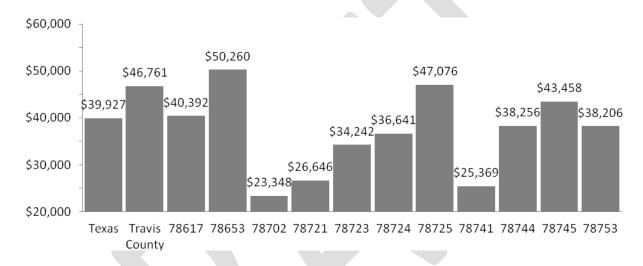


Table 1: Median household incomes for target zip code areas (U.S. Census Bureau, 2000).

Six areas have rates of individuals with incomes below the poverty level that are above both county and state levels: 78702, 78721, 78723, 78724, 78741 and 78744. Three have rates below both the state and county rates: 78617, 78653 and 78745. Subsequently, the areas with the highest rates of poverty are also home to majority minority populations. Only 23% to 49% of the population in these areas is white.

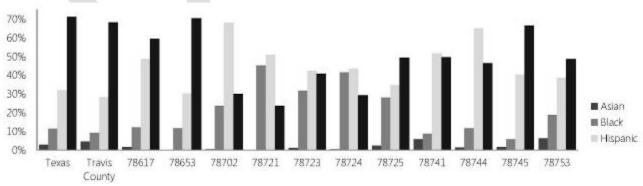


Table 2: Racial distribution from 2000 for target zip code areas (U.S. Census Bureau, 2000).

	Total Population	White	Black	Hispanic	Asian	Median Household Income	Individuals below poverty level
Texas	20,851,820	71.0%	11.5%	32.0%	2.7%	\$ 39,927	15.4%
Travis County	812,280	68.2	9.3	28.2	4.5	46,761	12.5
78617	15,222	59.3	12.1	48.5	1.5	40,392	11.0
78653	4,715	70.2	11.7	30.1	0.2	50,260	7.8
78702	22,534	30.0	23.7	67.7	0.4	23,348	28.8
78721	10,124	23.5	45.2	50.8	0.1	26,646	25.7
78723	30,110	40.8	31.8	42.3	1.2	34,242	19.6
78724	15,428	29.1	41.4	43.4	0.3	36,641	16.3
78725	1,836	49.3	27.9	34.5	2.4	47,076	12.0
78741	40,661	49.5	8.8	51.6	5.9	25,369	32.9
78744	33,706	46.3	11.7	64.8	1.4	38,256	17.6
78745	53,044	66.4	5.9	40.3	1.6	43,458	9.5
78753	44,210	48.5	18.7	38.5	6.3	38,206	13.7

Table 3: Racial and economic status of residents in the target study area (U.S. Census Bureau, 2000).

Based on the data presented above, it is possible to conclude that at least two of these areas qualify as USDA defined food deserts: 78721 and 78744. However, food access is affected by other factors including store quality, availability, cost and distance. Additionally, not every person in a food secure location is food secure. Even in zip codes with rates of poverty above the county and state level, a number of individuals still fall below the poverty level. This is particularly true in the 78745 zip code which is home to seven full-service grocery stores and seven food pantries. While it has a rate of poverty lower than that of the state and the county, and while the median household income is greater than that of the state median, it is also home to several affordable housing developments. During a conversation with residents at an affordable housing complex in this zip code issues of store quality, availability and cost were said to affect food access.

Mapping the Food Landscape of Travis County

Activity:

Use GIS data to assess access routes to food providers, including current and proposed transportation routes for streets, buses, metro, bike lanes, and sidewalks; and locate grocery, convenience, and specialty stores; farmers' markets and farm stands; community gardens; and hot and emergency food providers in the study area.

Methodology

From 2009-2010, information on food resources in Travis County was collected from non-profit and public agencies, and supplemented by general internet and Google Earth searches. Grocery and convenience store locations in Travis County were obtained from the Texas Comptroller of Public Accounts based on NAICS industry classification of grocery and convenience stores and warehouse clubs and supercenters. Internet searches provided supplemental information on ethnic stores, supercenters or general stores, like Walmart, and 'discount' stores. Data on emergency food provider was collected from the Capital Area Food Bank. Community garden locations were provided primarily by Sustainable Food Center, the Coalition of Austin Community Gardens, and Williamson County Health and Human Services. Farmers' market information was provided by Sustainable Food Center, Edible Austin, Texas Department of Agriculture, Cedar Park Farmers' Market, Barton Creek Farmers' Market, Georgetown Farmers' Market Associations, the River Valley Farmers' Market network and the San Marcos/New Braunfels Farmers' Market Association. Spatial analysis of the information collected on food resources was conducted using ArcGIS 10 to provide a visualization of the food landscape in Travis County. This information was combined with political boundary and urban infrastructure shapefiles from the Capital Area Council of Governments, the City of Austin, and the US Census Bureau. The target zip codes for this study and IH-35 were clearly symbolized in each of the maps to draw attention to the imbalanced distribution of resources across Travis County.

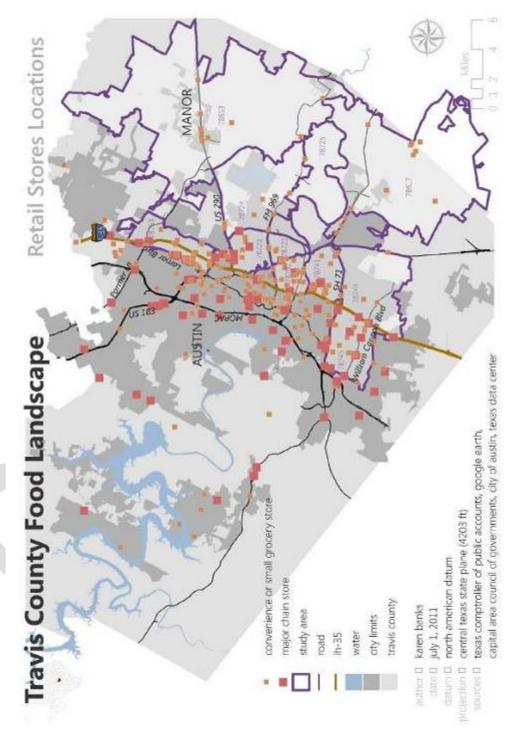


Figure 3: Grocery and convenience stores in Travis County

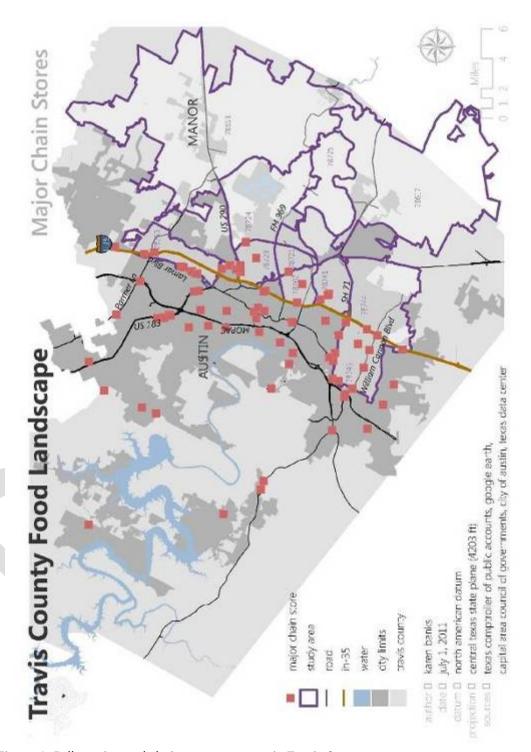


Figure 4: Full-service and chain grocery stores in Travis County

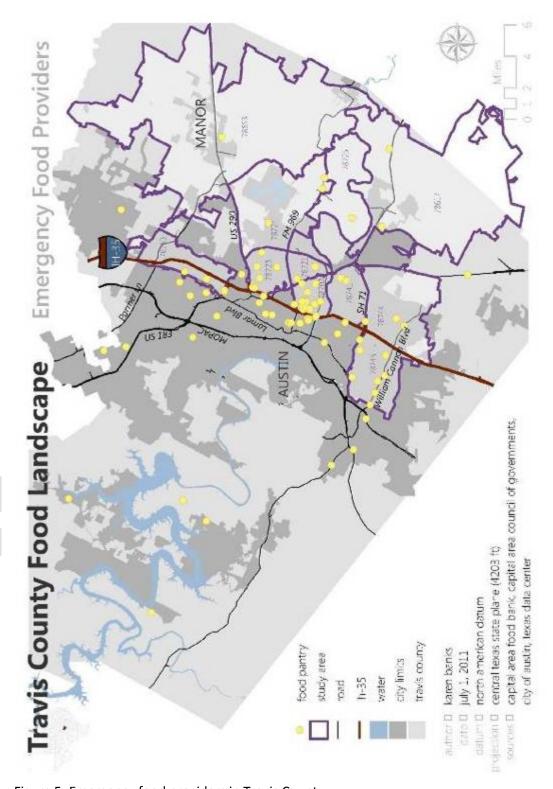


Figure 5: Emergency food providers in Travis County

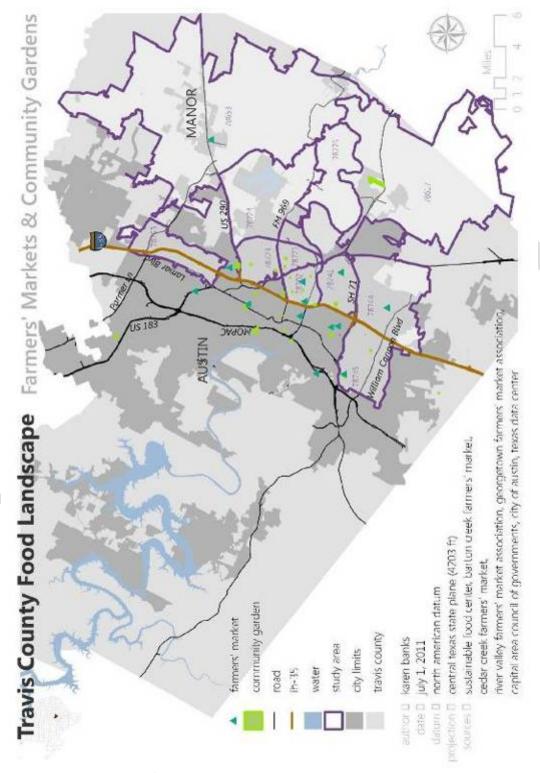


Figure 6: Farmers' markets and community gardens in Travis County

Analysis

Compounding the need for families to seek food assistance is a lack of easily accessible, full service grocery stores. Based on data from the Texas Comptroller of Public Accounts of retail stores classified as supermarket and convenience industries supplemented by an internet search of food retail locations, the study found that there are 325 food retail stores in Austin (see Figure 3). These include full service stores like HEB; wholesale stores like Costco; convenience stores like Diamond Shamrock; and ethnic stores like Hong Kong Market. Eighty-five of these are full-service grocery stores, including major chains like HEB and Walmart, as well as smaller local stores like Wheatsville and Fresh Plus. This list also includes La Michoacana and La Hacienda because these smaller chain meat markets are frequented by participants (see Figure 4).

Within the area of interest there are 153 food retailers, 25 of which are full-service grocery stores. Both 78745 and 78753 contain the most full-service grocery stores, with seven each. Not only are these areas home to the most people of all of the target zip codes, their proximity to IH-35 also makes them attractive sites for retail services. Of the 11 zip codes in the study area, five lack full-service grocery stores (78617, 78653, 78721, 78725, and 78744). Four of these zip codes (78617, 78653, 78724, and 78725) experienced the greatest population growth from 2000-2010 because of their location along the urban fringe. For residents in these areas, a full-service grocery store is as close as three miles but more often is up to 15 miles away.

	Total	Food	Full Service	Food	Discount
	Population	Retailer	Store	Pantry	Store
Travis County	812,280	325	85	93	38
78702	22,534	22	3	17	2
78741	40,661	18	2	5	3
78721	10,124	5	-	2	-
78723	30,110	10	4	7	2
78724	15,428	12	-	3	-
78753	44,210	36	8	2	5
78744	33,706	5	1	2	1
78617	15,222	14	-	2	1
78745	53,044	21	7	7	6
78725	1,836	-	-	-	-
78653	4,715	10	-	2	1

To supplement the dearth of full-service grocery store, residents turn to emergency food programs, community gardens and discount stores scattered throughout these areas to help meet their food needs. Of the 93 emergency food programs in Travis County, half of the programs (49) are in the area of interest (see Figure 5). By far, the zip code 78702 has the most emergency food programs due to its proximity to downtown and the abundance of social services located in the region. This area is home to 17 food pantries and soup kitchens. Thirteen out of 28 community gardens in the county are located in the area of interest (see Figure 6). Additionally, 21 of the 38 discount stores in Travis County, like Dollar General and Family Dollar, are located in the zip code area. Still, the 78725 zip code, in addition to lacking a full service grocery store, also is absent an emergency food program and a discount store. The 78725 zip code does not have a single food resource. While there are five convenience stores and two food pantries in 78721, and there are 12 convenience stores and two food pantries in 78724, these areas lack a full service store as well as discount stores. While these programs help to supplement one's food diet, they are not a substitute for a full-service grocery store, but again, the presence of a full-service grocery store does not guarantee food security.

PERCEPTIONS OF THE FOOD LANDSCAPE

Activity:

Host at least 12 community meetings for at least 30 community members per meeting.

From June through October, 2010, 19 community meetings were conducted at 16 locations in the 11 zip code areas of interest in Austin. These locations included both publically accessible as well as privately run institutions.

Austin's Colony Community Center		78725
Dove Springs Recreation Center	5801 Ainez Dr.	78744
East Rural Community Center	600 W. Carrie Manor St.	78653
Elroy Public Library	13512 FM 812	78617
Gus Garcia Recreation Center	1201 E. Rundberg Ln.	78753
Haynie Chapel	16415 Greenwood Dr.	78617
LBJ High School	7309 Lazy Creek Dr.	78724
Oak Meadows Baptist Church	6905 S IH-35	78744
Rosewood Zaragosa Neighborhood Center	2808 Webberville Rd.	78702
Ruiz Branch Library	1600 Grove Blvd	78741
Sierra Ridge Learning Center	201 W. St. Elmo	78745
South Rural Community Center	3518 FM 973	78617
St. James Episcopal Church	1941 Webberville Rd.	78721
Turner Roberts Recreation Center	7201 Colony Loop Dr.	78724
Windsor Park Branch Library	5833 Westminster Dr.	78723
YMCA East Communities	5315 Ed Bluestein Blvd	78723

All of the sites, with the exception of Sierra Ridge, were located east of IH-35. The sites were selected because of their location within the area of interest and their involvement with the community. Most of the sites are public facilities operated by the local government of either the city or the county and provide a variety of services. Two of the focus group sites were privately managed community centers that provided a public space for residents within a select neighborhood. The community center at Sierra Ridge in 78745 is part of a Foundation Communities multi-family affordable housing complex. The community center at Austin's Colony serves residents of this peri-urban neighborhood in 78725. Three of the facilities are churches, two of which operated weekly emergency food assistance programs while the third was enthusiastically involved in the community. Of the eleven sites, seven operated weekly emergency food assistance programs.

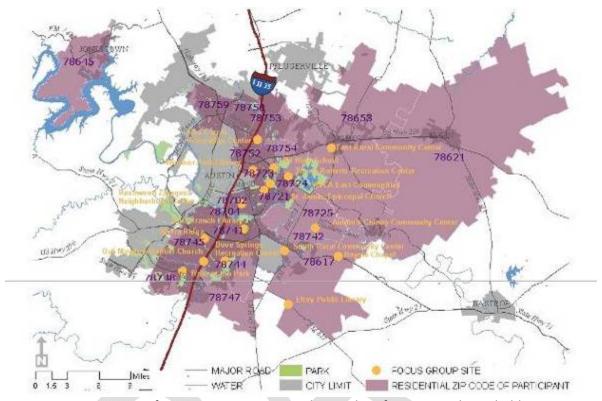


Figure 8: Location of community meetings and zip codes of participant households.

Community Meeting Format

The community meetings were interactive discussions guided by 15 open-ended questions about personal food shopping and eating habits, transportation, cost, nutritional education, neighborhood-specific social concerns, and opinions on how to improve food access. They were held at times that were convenient for the majority of residents in an area. The meetings lasted for between 30 minutes to an hour and were conducted in English and Spanish. Each participant was compensated for their time with a box of local produce.

Before the meetings, participants individually filled out a 26-question survey that consisted of questions about the frequency of meal preparation, dining out, and food shopping, financial constraints, possible incidents of food insecurity, and demographics. Participants also partook in an interactive exercise by placing labeled, colored dots on the three locations where they get most of their food from on a giant map of food resources in Travis County. Disparities in food access in east Austin are identified based on an evaluation of major trends in participant responses during the meetings and to the survey, as well as patterns of food retail patronage.

Community Meeting Participants

Residents invited to participate in the community meetings were: 1) from of one of the zip code areas of interest, 2) responsible for household food needs, and 3) between the ages of 18-65. The income level of residents was not a requirement for participation. Instead, participants were strategically recruited from these select zip code areas. In order to better understand the factors that influence food access in Austin, this study examines the food shopping and consumption patterns of residents in Austin. Therefore, participants were those who do the majority or shopping and/or cooking for a household. Due to vast situational variations in housing and assistance available to individuals 65 and older, as well as the general dependency of youth under 18 on their parents, the target age was between 18 and 65.

Recruitment

Participant recruitment was a two-phase process involving the establishment of relationships with community organizations followed by direct outreach to residents. Information on community resources within the areas of interest was gathered through internet searches and word-of-mouth recommendations of food-focused and community organizations, including schools, libraries, community centers, churches, non-profit organizations and neighborhood associations. These organizations were contacted in order to help determine appropriate venues and times for the community meetings and to help with recruitment. Interviews were conducted with over twenty community leaders, including church pastors, social service providers, non-profit program directors, neighborhood association members and passionate residents. Recruitment therefore, was accomplished through outreach to organization constituents, as well as general distribution of flyers to schools, select businesses, and door-to-door.

Analysis

The total number of participants in the focus groups was 166: 110 female, 28 male, and 28 not reported. The majority of participants resided in zip codes in East Austin. Areas that had the most number of participants were: 78617, 78653, 78723, 78724, 78725, 78745, and 78753. With the exception of participants who participated in focus groups in the 78745 and 78753 zip codes, most responses reflected a general discontent with either the quality or lack of grocery stores in their neighborhoods. Residents from 78617 and 78653 are particularly interested in food access because there are no full service grocery stores in their neighborhoods.

Home Zip Code	Count = 149	%	Home Zip Code	Count = 149	%
78617	17	11	78741	2	1

78621	4	3	78742	1	1
78645	1	1	78744	5	. 3
78653	17	11	78745	16	10
78702	5	3	78747	2	1
78704	4	3	78752	1	1
78721	3	2	78753	15	10
78723	15	10	78754	6	4
78724	13	8	78758	5	3
78725	15	10	78759	1	1

Table 1: Distribution of Participants by Zip Code

The people who participated in the meetings were predominately of Hispanic origin and female. A signification proportion of participants were representatives of ethnic minorities. In 2000, the population of Austin was 53% Caucasian, 30% Hispanic, 10% African American, and 5% Asian. In 2010, the population of Austin was 49% Caucasian, 35% Hispanic, 8% African American, and 6% Asian. Comparatively, the ethnic composition of participants for this study was 16% Caucasian, 63% Hispanic, 17% African American and 1% Asian. Of the 63% Hispanic or Latino participants, 67% reported to be Mexican while only 13% claimed to be Mexican American. The majority (53%) reported to speak Spanish most of the time. The discussions during the focus groups were reflective of this ethnic composition with conversation about traditional diets, shopping choices, and the availability of culturally-appropriate ingredients.

Count = 150	%
1	1
2	1
25	17
94	63
	67
	5
	13
	1
	6
	4
	2
24	16
3	2
Count = 151	%
80	53
65	43
4	3
2	1
	1 2 25 94 24 3 Count = 151 80 65 4

Given the topic of food access, the majority of participants were female from households composed of two adults with at least one child. While food is consumed by all people, domestic concerns over grocery shopping and meal preparation reside predominately in the realm of female household obligations.

Marital Status	Count = 151	%
Married	73	48
Separated or divorced	31	21
Single, never married	34	23
Widowed	12	8
Employment Status	Count = 147	%
Full-time	32	22
Part-time	30	20
Unemployed	9	6
Retired	21	14
Stay-at-home full time	53	36
Formal Education	Count = 142	%
Less than 12 yrs	44	31
High school/GED	47	33
Some college	23	16
College graduate	20	14
Advanced degree	7	5

Table 2: Marital and Employment Status as well as Formal Education of Participants.

Over three-quarters (77%) of participants earn less than \$1,999 per month. According to the Center for Public Policy Priorities, a family of four with two adults and two children need to earn a gross monthly income between \$3,637 and \$4,423 to afford to live in Austin (Hagert, 2007). Only 11% of participants earn enough to afford to live in Austin this estimate.

Monthly Household Income	Count = 137	%
\$0-999	55	40
\$1,000 - 1,999	51	37
\$2,000 - 2,999	14	10
\$3,000 - 3,999	3	2
\$4,000 - 4,999	8	6
\$5,000 or more	5	3
Below 100% Poverty Level	Count = 136	%
Yes	66	49
No	70	51

Receive SNAP	Count = 142	%
Yes	43	30
No	99	70
Receive WIC	Count = 148	%
Receive WIC Yes	31	% 21

Almost half of participants (49%) earn below the poverty level. However, only one third of participants receive food assistance from the federal government: 30% receive Supplemental Nutrition Assistance Program benefits and 21% receive Women, Infants, and Children benefits. Since eligibility for the SNAP program requires that individuals earn a gross income at or below 130% of the poverty line, more than the 49% of participants that fall below the poverty line would be eligible to receive SNAP benefits. This discrepancy in eligibility and enrollment means that fixed-income families may be facing an undue financial burden that could be alleviated through government assistance.

Main themes from the community meetings exploring food access in Travis County

Barriers to Healthy Food Access

High price of fruits and vegetables

Inconvenience

Poor quality of foods

Poor shopping experience

Strategies to Cope with Barriers

Comparing store prices

Looking for specials

Buying in season

Cooking at home

Recommendations

More full service groceries

Better grocery store environments

Farmers markets in neighborhoods, schools

More small agriculture (community & school gardens)

The Cost of Food

As one participant stated during a meeting at St. James Episcopal Church in East Austin: "it's hard to always have what you need if you don't have money to buy it." It is no surprise that the cost of food is a universal concern for the 166 participants in the focus groups. Groceries are among the top five household expenses for participants.

Household Expense	Number of Responses	Rank
Rent	104	3
Utilities	122	1
Transportation	105	2
Daycare	10	11
Phone	86	5
Clothing	55	6
Groceries	99	4
Eating out	16	8
Entertainment	12	10
Pets	21	7
Other (Insurance, medicine, etc.)	13	9

Table 3. Ranking of household expenses as identified by focus group participants.

Of the top three considerations when making purchasing decisions--price, quality, and taste--people by far identified price as the number one factor. For families with limited financial resources the necessity to remain within a fixed budget causes a tradeoff between healthy foods with dense foods. Participants responded unanimously that it is important to eat fruits and vegetables because they provide vitamins, nourishment, nutrition, and strength, to help lower cholesterol, to cause one to think clearly, and to help prevent diet-related diseases, like diabetes. Fruits and vegetable "help your body balance and process everything properly." The issue, however, is that fruits and vegetables are comparatively more expensive because you need to eat more of them to feel full and the satiety does not last as long. Therefore, families with fixed incomes are faced with the dilemma of choosing between their values and meeting their basic needs.

The price of food and budget limitations force more than just a tradeoff between healthy foods and satiety, they also limit families' options, both in terms of variety and production method. The influence of cost is such that participants in the focus groups were unable to select organically grown produce because the price is too high. The general sentiment of focus group participants was summed up by a female participant at the Sierra Ridge focus group: "It's important to eat that [organic] food but sometimes it's not possible to buy them. That type of food is expensive." Participants indicated that they would be willing to

pay slightly more for organic but the current gap between organic and conventionally grown produce is too large. Cost is therefore a critical factor driving grocery shopping decisions. The cost of food reduces the diversify of one's diet and contributes to decision making that is counter to one's values: choosing satiating over salutary foods even though a healthy diet is of importance; and purchasing conventionally over organically grown produce.

Store Proximity

Even though the price of food is the dominant factor affecting the food shopping decisions of participants, the proximity of full-service grocery stores, as well as the quality of produce at the stores also affect participants' purchasing decisions. For participants in the meetings at the Elroy Public Library, Haynie Chapel, Austin's Colony, South Rural Community Center, and East Rural Community Center and for one participant in the focus group at Gus Garcia Recreation Center, lack of access to full-service grocery stores was of primary concern to access healthy food. Located in transitional areas between the urban core and rural surroundings, a lack of planning to include basic service amenities with the low density development in these areas contributes to the lack of full-service stores in these areas. At times, residents have to travel up to 20 miles to buy groceries. For families on fixed-incomes, grocery shopping therefore is no longer a solitary errand. It requires forethought to incorporate into one's daily commute or merge with other errands, and requires advanced preparation to place a cooler full of ice packs in the car so that food does not spoil.

If an item is forgotten then a family must do without or alter their meal. Most participants preferred to do without the ingredient instead of going to a corner store. Corner stores are unanimously perceived to be expensive with limited, low-quality produce. The limited and expensive variety of healthy foods available in corner stores is a public health concern because families in areas without full-service grocery stores must rely on these stores at time to supplement their diets where low-nutritional value items are cheaper.

The lack of access to stores also poses an equity issue and might be a reflection of covert industry redlining. East Austin has traditionally contained higher concentrations of lower-income residents as well as minority populations. Using IH-35 as the physical dividing line, in terms of sheer numbers, there are 21 full service grocery stores out of 135 food retailers (15%) in eastern Travis County compared to 56 out of 197 (28%) in western Travis County. The full service grocery stores in the eastern part of the county serve 17,870 residents per store compared to 11,589 in the west. Eastern county grocery stores serve a third more residents than stores in the west. Without easy access to full service grocery stores these families face a tradeoff between gas and groceries. Because of the increases in the cost of groceries and gasoline, increasing numbers of families may be forced to seek emergency food assistance from

alternative sources, like food pantries, which provide filling but not necessarily healthy or culturally-appropriate food options. Limited access to healthy food options unnecessarily and unjustly increases the financial and health burden of fixed-income families.

Store Quality

As mentioned above, quality, especially of produce and meat, is one of the three main factors participants consider when making their shopping decisions. Terms like freshness, not mildewed, not wilted, not bruised, not rotten, good appearance, looks good, good shape, pretty, nice, and fresh were used to describe expected food quality. The quality, combined with the price of the food available at a retailer, as opposed to location or convenience, tend to be the main reasons participants shop at a particular store.

Not only are participants concerned with the quality of produce, they are also concerned with the quality of the stores in their neighborhood. For participants in meetings at Windsor Park Branch Library, LBJ High School, Dove Springs, Elroy Public Library, Sierra Ridge, Gus Garcia Recreation Center, and East Rural Community Center, the quality of a store affects where they shop. Differences in price, store selection, and the physical condition of the store all contribute to decisions about where to shop. Store quality amongst HEBs is reported to vary, causing some participants to bypass their neighborhood store for a store across town. The quality of the HEB store at Ed Bluestein and Springdale Road was repeatedly spoken of negatively. Remarks were made about problems with panhandling and crime, traffic in the parking lot, and lack of cleanliness, variety and upkeep. There was an implicit sense of a racially-motivated stigma surrounding the store. One woman at the LBJ High School meeting noted that her friends labeled this store: "the ghetto HEB." In order to definitively claim unjust practices by the grocery industry, further study of the spatial variations in store quality would need to be examined. Regardless, the unsatisfactory quality of the store causes participants to travel farther, expending more gas and time, placing an unjust burden on fixed-income families.

Cost Savings

To cope with budgetary constraints on grocery purchases, participants adopt techniques to either stretch their food dollar or to save money. Participants regularly buy in season, seek sales or specials, and compare store prices in order to be able to purchase more for less. Season is another of the three factors participants consistently said affect their shopping decisions because produce, especially fruit, purchased in season is cheaper and tastes better. Other tactics participants use to maximize their food budgets are to seek specials and compare prices between stores. Borrowing the aptly descriptive name used by one female participant at

the Haynie Chapel meeting, most participants are "couponaholics". They seek out discounts, specials and sales in order to save money.

Another way for participants to save money is to prepare meals for their families at home. Responses during focus group conversations and to survey questions indicated that most participants consistently prepared at least one meal, mainly dinner, for their families. Over 52% of respondents claimed that their family dined together almost every day while another 31% eating together more than half of the time. Eating at home is reported to be healthier and more economical.

		Count = 143	%
Dine Together	Almost always	76	53
	Sometimes	47	33
	Not very often	20	14
		Count = 149	%
Fast Food Consumption	Never	75	50
	1-2 days per week	67	45
	3-4 days per week	4	3
	5-7 days per week	3	2

Table 3: Dining Habits

Improving Food Retail Spaces

Fresh is best. Eating fruits and vegetables is important to participants, especially if they are fresh. The preference for fresh produce is indicative of participants' responses for how to improve food access in their communities. The responses are reflective of the tension discussed previously between cost and values. They are also representative of the economic and physical situation of participants. The ideal for participants varied from having food delivered to one's door, to being able to purchase whatever one wants, and to raising a big garden. Their responses reflect the conditions that surround the participants. For participants who live in grocery store deficient areas, the ideal is a farm or a garden. For those who live in proximity to a grocery store, the ideal is improvement of present amenities.

The solution to increase access to healthy food in the peri-urban areas was consistently said to be a full service grocery store in a convenient location with a wide variety of items, rather than a small convenience store with a limited selection of items. This is because, as one participant said: "They can conveniently make that price ridiculous." For those within proximity to a grocery store, the solutions included creating a space for a community garden with classes

on how to grow food, improving the condition of nearby stores, and hosting a weekly farmers' market.

Discussion around farmers' markets emerged during most of the focus groups and elicited varied reactions. A farmers' market would serve the desires of participants with the provision of easily accessible, fresh, often organic produce. They are relatively easy to develop since they do not necessarily require a brick and mortar storefront. However, there was resistance to this solution because of perceptions about the markets currently in Austin. Participants indicated that the markets are expensive, too far away, and not at convenient times. While participants had heard talk of farmers' markets in the city, only a handful were familiar with their locations, which were not convenient for participants. Overwhelmingly though, the main concern with farmers' markets was the price of produce, specifically in Central Texas.

More stores = improved access

The location of full-service, chain grocery stores in the peri-urban areas of this study was recommended by participants as the most desirable solution to improve food access. Neighborhoods with chains stores pay less for food. The location of a chain store in these peri-urban areas would reduce the burden of cost by shifting reliance away from high priced convenience stores and reducing the travel distance for grocery errands. Successful recruitment of a chain store would require a market feasibility study, identification of multiple possible locations, incentives, and strong political leadership (Pothukuchi, 2005). Additionally, the process of locating a grocery store will require proactive participation on the part of the local government or a nonprofit organization. Community Development Corporation partnerships with chain grocery stores have been shown to be successful in locating grocery stores in underserved areas (Pothukuchi, 2005).

Underlying all of these elements are proactive efforts to plan for development of a grocery store. While a chain grocery store brings with it myriad benefits in addition to improved access, including outside investments, jobs and neighborhood pride, it can also have negative effects on a neighborhood. Locating a chain store in the peri-urban area along the urban frontier could spark uncontrolled development outside the city limits, leading to further fragmentation of already endangered agricultural land. Organized, active participation from residents in planning for future development and in determining the location of a future store is necessary to attempt to control development.

No more ghetto HEB

Improving the quality and variety of products at existing stores within the study area would increase the frequency with which participants shop at their neighborhoods grocery stores. This is beneficial not only for the customer because it save on travel cost and improves neighborhood pride, but it is also profitable for the grocery store. Exemplar stores, according to participants, by which to model improvements include Central Market and Whole Foods. The wide variety of good quality produce, including organic, along with appealing product labeling, cooking and tasting demonstrations, a clean facility, and sufficient parking and staff all make these attractive locations.

Alternative Food Sources

A chain grocery store is not the only solution, however. A cooperatively-run, community based grocery store or a locally-owned store are other options. The challenge is to develop a dependable customer base by offering a wide enough variety of desired food products within a limited space without price gouging. Creating a perception that differentiates a small grocery store from a convenience stores is imperative. Unanimously participants were unwilling to shop at a convenience store even if the store sold healthy produce. This rejection of healthy corner stores has implications for trends toward reliance on corner stores as temporary solution to fill the gap in access.

A suggested alternative to retail stores is a farmers' market or a mobile farm stand. A farmers' market or a mobile farm stand would fulfill the desire for fresh produce but would only increase access to certain foods. Even though participants value and prefer to eat fresh produce, the bottom line is cost. If the price of produce at such markets is not near that of HEB, then this may not be a viable option. For local farmers, this means possibly offering produce at wholesale cost in low-income areas. It also means providing education about and experience with local farms to actively engage low-income customers in the local food system.

Encouraging engagement with farmers' markets amongst minority populations requires additional efforts towards place making and the integration of cultural codings that resonate with the community (Alkon, 2008; Guthman, 2008). This requires stepping beyond a focus on food to directly target the racial and economic inequalities that perpetuate food insecurity (Guthman 2008). Providing incentives for or selectively inviting African American or Latino farmers into the market, offering culturally-appropriate foods, creating key allegiances with minority-led community organizations, and provision of information in a dialect that resonates with African American and Latino communities can all help to begin to break down structural inequalities.

What happened to the green thumb people?

Generational gaps in the understanding of where food comes from were exemplified during a couple of the focus groups. Recognition of a loss of gardening and agricultural activities was especially prevalent amongst African American participants. Present amongst participant responses was also a desire to reverse this trend. Although less than a quarter of participants kept home gardens, a desire for fresh food made participants interested in learning to grow their own produce. Community gardens were repeatedly mentioned as solutions to increase access to healthy food. Targeting the development of community gardens in neighborhoods with high concentrations of African Americans would allow for the opportunity to capture waning generational knowledge about gardening.

Cultural Sensitivity or Assimilation

Food often serves as a foundation over which people connect or learn about other cultures. Traditional meals embody information about cultural customs, social values, and the ecoregion in which the ingredients are produced. Some participants, especially Latino participants, expressed desire to retain their food heritage. The lack of availability of culturally-appropriate ingredients is therefore a barrier for these participants as they strive to retain their food heritage.

Seemingly contradictory to the objective of cultural sensitivity is food acculturation. Much of the produce available at local food retailers is either place specific or socially acceptable. Desires to know how to prepare foreign foods was a shared sentiment amongst many participants, including foreign born and US citizens. The most commonly referenced produce that participants are unaware of how to prepare are eggplant, persimmon, fig, greens and artichoke. Locality specific cooking classes that offer instruction on how to prepare healthy meals using commonly available ingredients would improve the self-reliance of community members by providing them more options of meals to prepare. Providing information on food budgeting, food preservation and perhaps the incorporation of local produce could help families save money and increase opportunities to access healthy food.

Food Democracy

People, and by extension one's community, are crucial elements in transforming the structural inequities that constrain food access. To escape the trap of performing like a charity instead of a movement, efforts to improve food access must embody food democracy. Food democracy promotes the active participation of individuals in all aspects of the community food security movement. Active participation, however, requires that an individual values the

objectives of community food security. This value is acquired through learning about and experiencing community food projects and policies. "The transition to food democracy requires that people develop the knowledge and skills necessary to actively participate in society and to have an impact on different political levels (Levkoe, 2006)." Providing opportunities and inviting people to espouse some level of food autonomy will help individuals to develop a personal narrative about the values of community food security.



SURVEYING THE FOOD LANDSCAPE

Activity:

Conduct direct observation surveys of the cost, quantity, quality, and variety of fresh foods of the main grocery store and at least 5 convenience or specialty stores.

Conduct direct observation surveys of farmers' markets and farm stands.

From May – September 2010, a stratified sample of 108 grocery and convenience stores, primarily in Travis County were surveyed using the Texas Nutrition Environments Assessment tool. The Texas Nutrition Environments Assessment (TXNEA) is a tool developed by the Texas Department of State Health Services to assess the availability, cost, and quality of healthy food options at grocery and convenience stores. Fifty-five trained University of Texas at Austin School of Nursing graduate students and dietetic undergraduate students, as well as a handful of other community members conducted the surveys. By surveying these stores, this project hopes to identify gaps and possible disparities in access to healthy food.

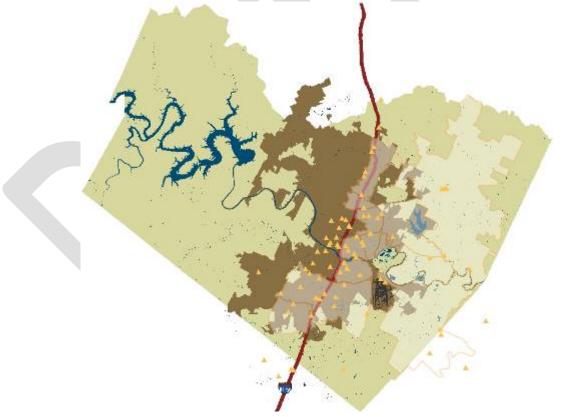


Figure: Stores survey with the TXNEA tool.

In addition to grocery and convenience stores, this study also surveyed seven farmers' markets using a modified version of the TXNEA tool. By surveying farmers' markets, this project hopes to identify differences in cost and gaps in produce availability.